

B1  
conceded

flexible and tough cured product will be obtained. As such a high molecular weight polyol, a polyoxyalkylene polyol, a polyester polyol, a polycaprolactone polyol or a polycarbonate polyol is, for example, employed.

Page 7, please replace the paragraph at lines 15-25 as follows:

B2

Specifically, it may be a polyisocyanate such as tolylene diisocyanate, diphenylmethane diisocyanate, polymethylenepolyphenylene isocyanate (crude MDI), xylylene diisocyanate, isophorone diisocyanate or hexamethylene diisocyanate, or its prepolymer-modified product, isocyanurate modified product, urea-modified product or carbodiimide modified product. Among them, a diisocyanate having two isocyanate groups in one molecule, is preferred. These polyisocyanate compounds may be used alone or in combination as a mixture of two or more of them.

Page 9, please replace the paragraph beginning at line 26 to page 10, line 5 as follows:

B3

The reaction is preferably carried out at a temperature for a common urethane-modification reaction i.e. from 30 to 90°C. At the time of the reaction, a urethane-modification catalyst such as cobalt naphthenate, zinc naphthenate, lead 2-ethylhexanoate, dibutyltin dilaurate, tin 2-ethylhexanoate, triethylamine or 1,4-diazabicyclo[2.2.2]octane, may be used.

Page 11, please replace the paragraph beginning at line 23 to page 12, line 13 as follows:

B4

Further, for the composition of the present invention, for the purpose of lowering the viscosity, the following ethylenically unsaturated group-containing compound may be used as

B4  
cancel

a diluting agent. As such an ethylenically unsaturated group-containing compound, in addition to the above-mentioned hydroxylated (meth)acrylate compound (C) such as 2-hydroxyethyl(meth)acrylate, a (meth)acrylate compound containing no hydroxyl group, such as an alkyl (meth)acrylate such as methyl (meth)acrylate or ethyl (meth)acrylate, phenoxyethyl (meth)acrylate or isobornyl (meth)acrylate, or a vinyl ether monomer such as hydroxybutyl vinyl ether, lauryl vinyl ether or 2-ethylhexyl vinyl ether, may be mentioned. The urethane (meth)acrylate oligomer of the present invention has a low viscosity by itself, and in many cases, such a diluting agent may not be required. It is preferred not to use such a diluting agent.

Page 13, please replace the paragraph beginning at line 2 as follows:

B5

Polyol A, C: Is prepared by reacting propylene oxide to an initiator (a polyoxypropylene diol having a molecular weight of 700) using zinc hexacyanocobaltate-glyme complex as a catalyst, and then, deactivating the catalyst, followed by purification.

Page 13, please replace the paragraph beginning at line 7 as follows:

B6

Polyol B: One is prepared by reacting propylene oxide to an initiator (a polyoxypropylene diol having a molecular weight of 700) using zinc hexacyanocobaltate-glyme complex as a catalyst, then reacting ethylene oxide, then deactivating the catalyst, followed by purification. The oxyethylene group-content is 20 wt%.

Page 13, please replace the paragraph beginning at line 13 as follows:

B7  
Polyol D: Is prepared by reacting propylene oxide to an initiator (a polyoxypropylene triol having a molecular weight of 1,000) using zinc hexacyanocobaltate-glyme complex as a catalyst, then deactivating the catalyst, followed by purification.

Page 13, please replace the paragraph beginning at line 18 as follows:

B8  
Polyol E: Is prepared by reacting propylene oxide to an initiator (a polyoxypropylene diol having a molecular weight of 700) zinc hexacyanocobaltate-t-butanol complex as a catalyst, then deactivating the catalyst, followed by purification.

Page 13, please replace the paragraph beginning at line 23 as follows:

B9  
Polyol F: Is prepared by reacting propylene oxide to an initiator (a polyoxypropylene diol having a molecular weight of 700) using potassium hydroxide as a catalyst, followed by purification. In Table 1, the number of hydroxyl groups, the hydroxyl values  $V_{OH}$  (mgKOH/g), the total degrees of unsaturation  $V_{US}$  (meq/g) and values  $x$  ( $x=(0.45/V_{OH})+0.02$ ) are shown.

Page 14, please replace the paragraph beginning at line 7 as follows:

B10  
To 100 parts by weight (hereinafter referred to simply as parts) (0.025 mol) of polyol A, 8.7 parts (0.05 mol) of tolylene diisocyanate (T-100, tradename, manufactured by Nippon Polyurethane Industry Co., Ltd.) is added, followed by a reaction at 80°C for 4 hours in the presence of 0.01 part of dibutyltin dilaurate, to obtain a urethane prepolymer. To this urethane prepolymer, 0.05 part of dibutyltin dilaurate and 0.05 part of hydroquinone monomethyl ether is added, and 6.38 parts (0.055 mol) of 2-hydroxyethyl acrylate is dropwise

B<sup>10</sup>  
added at 40°C. Thereafter, a reaction is carried out at 60°C until absorption by an isocyanate group at a wavelength of 2,250 cm<sup>-1</sup> in the infrared absorption spectrum is no longer observed, to obtain a urethane acrylate oligomer.

Page 15, please replace the paragraph beginning at line 3 as follows:

B<sup>11</sup>  
A urethane acrylate oligomer is obtained in the same manner as in Example 1 except that polyol B is used instead of polyol A.

Page 15, please replace the paragraph beginning at line 7 as follows:

B<sup>12</sup>  
A urethane acrylate oligomer is obtained in the same manner as in Example 1 except that instead of 100 parts of polyol A, a mixture comprising 182 parts (0.0182 mol) of polyol C and 45 parts (0.0045 mol) of polyol D, is used, to obtain a urethane acrylate oligomer.

Page 15, please replace the paragraph beginning at line 13 as follows:

B<sup>13</sup>  
A urethane acrylate oligomer is obtained in the same manner as in Example 1 except that instead of polyol A, polyol E is used.

Page 15, please replace the paragraph beginning at line 17 as follows:

B<sup>14</sup>  
A urethane acrylate oligomer is obtained in the same manner as in Example 1 except that instead of polyol A, polyol F is used.

Page 15, please replace the paragraph beginning at line 21 as follows:

B15  
A urethane acrylate oligomer is obtained in the same manner as in Example 1 except that instead of 100 parts of polyol A, 50 parts (0.025 mol) of polyoxytetramethylene glycol having a molecular weight of 2,000, is used, to obtain a urethane acrylate oligomer.

Page 15, please replace the paragraph beginning at line 27 as follows:

B16  
Examples 1 to 6 may be evaluated by the following methods. The results possible are shown in Table 2.

Page 16, please replace the paragraph beginning at line 3 as follows:

B17  
The viscosity (cP) at 25°C is measured by means of an E-type rotary viscometer.

Page 16, please replace the paragraph beginning at line 7 as follows:

B18  
To 100 parts of the urethane acrylate oligomer in each of Examples 1 to 6, 3 parts of benzophenone and 1 part of 2-hydroxy-2-methyl-1-phenylpropan-1-one is added and thoroughly is mixed at 60°C, to obtain a photo-curable composition. The obtained photo-curable composition is coated on an OPP film (Oriented polypropylene film) bonded to a glass plate by means of an applicator of 8 mil and is irradiated for 5 seconds by a high pressure mercury lamp having an output of 80 W/cm from a height of 15 cm, to obtain a cured film.